MARYLAND FISHERIES

PUBLISHED BY CONSERVATION DEPARTMENT OF MARYLAND

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EXTRACTS FROM GOVERNOR RITCHIE'S MESSAGE TO THE LEGISLATURE OF 1931 RELATIVE TO CONSERVATION OF OYSTERS, FISH, CRABS, AND GAME

Oysters.

Shelling. Since the reshelling program was adopted in 1927 the Conservation Department has planted on the depleted oyster bars of the State, 2,000,000 bushels of shells and 136,000 bushels of seed oysters. The Advisory Committee is of the opinion that this year's growth of young oysters will be the best for the past 15 years, and the department is exerting its best efforts for police protection and inspection to conserve this young growth, in order that it may reach marketable size. The continuance of this shell and seed oyster planting program is recommended.

Cull Law. Some sections of the Chesapeake Bay, particularly the portion north of a line drawn from Sandy Point Light House to Love Point Light House, do not grow legal three-inch size oysters in sufficient quantities to justify the dredgers in working these areas. These sections, however, do produce oysters of a two and one-half inch measurement in sufficiently large quantities for dredging when oysters are scarce in other sections of the Bay, and if such oysters are legalized at these sections that would

enable the steam houses to operate when they could not secure the three-inch size, and thus would not have to remain idle.

For these reasons the Conservation Commissioner asks that he be given the authority to permit the catching of oysters of the minimum size of two and one-half inches on these particular areas and sections of the Bay, when he finds that there is a necessity therefor.

Potomac River. This river lies wholly within the State of Maryland, but under the compact of 1785 with Virginia it is fished in common by the citizens of both states. In the past the Potomac River has furnished perhaps one-third of the oyster supply in Maryland. It is now badly depleted. Because of the compact of 1785 any rehabilitation work would have to be undertaken by Maryland and Virginia jointly and cooperatively.

In September, 1927, the Conservation authorities of the two states conferred, and with the cooperation of the United States Bureau of Fisheries a survey of the Potomac River was undertaken. This was completed in December, 1928, and it showed a number of best-known oyster bars in the river were depleted in the sense that they did not have a sufficient supply of oysters to warrant oystermen in resorting to them for commercial purposes, and some of these bars were exhausted.

This condition was made the subject of a special report to the General Assembly of 1929, and by Joint Resolution No. 12 of that year it was provided that the Governor should commission the Conservation Commissioner of Maryland to confer with the Commissioner of Fisheries of Virginia, or other authorities representative of that state, for the purpose of reporting such recommendations which they might agree upon for submission to the General Assembly of Maryland of 1931.

The Conservation Commissioner was duly commissioned to carry out the intent of this Joint Resolution, and during the last session of the General Assembly of Virginia he spent considerable time in Richmond, where he assisted materially in securing legislation in Virginia concurrent with legislation previously passed in Maryland dealing with the oyster cull law and with anchored drift and gill nets. The question of rehabilitating the oyster bars of the Potomac River was considered at length. Virginia, however, made no appropriation for this work, but did pass an act to stop the dredging of oysters in the Potomac River, the same to become effective on the passage of a similar act by the State of Maryland.

If the General Assembly would concur in the Virginia law to the extent of closing the entire river against dredging for a period of time this would, of course, give the opportunity for the river to be or to become replenished. If the General Assembly would not be willing to go to that extent, it could still help the situation materially by closing alternately specified oyster rocks of the river, and the Conservation Department advises me that the Virginia act prohibiting the catching of oysters in the entire river is suf-

ficiently broad to be concurrent with any Maryland act closing any part or parts of the river.

It is recommended that as soon as possible after the General Assembly convenes this entire matter be laid before the joint committees of the House and Senate on the Chesapeake Bay and tributaries, to the end that appropriate and desirable action may be taken by Maryland concurrently with Virginia for rehabilitating the oyster supply of the Potomac River.

The joint committees of the House and Senate should also consider means to remove the discrimination against Maryland fishermen in the Potomac River occasioned by the enactment of a number of statutes during recent years. These statutes relate to the size of nets, to the length and weight of fish which may be caught, and to other matters, and they subject Maryland fishermen to restrictions which do not apply to Virginia fishermen. The desirability of concurrent legislation which will provide uniform regulations with respect to these subjects in the Potomac River is obvious.

Crabs.

As the result of concurrent protective laws passed by Maryland and Virginia the catch of hard and soft crabs during the past three years has increased 300 per cent. There is now an abundant supply of crabs in our waters, and during the past season there was also a predominance of female crabs and a great quantity of the female egg-bearing or sponge crabs. No further legislation on this subject seems to be needed.

Fish.

Material progress has been made in fish cultural work. Through the aid of the Angler's License Fund new bass and pond fish and brook-trout hatcheries have been established and the State is now able to gather eggs from its own brood, and, at the same time, it can raise trout to the legal size before liberating them in the waters. The distribution of such fish as large-mouth black bass and crappie has greatly increased this year by reason of the establishment of a rearing lake at Fairlee in Kent County. A small-mouth black-bass hatchery in Washington County appears to be needed.

Organizations interested in fishing will introduce and strongly back bills prohibiting purse-nets. It is not necessary to discuss this subject at any length because it has been up many times before, and is familiar to the members of the Legislature and to the people of the State. These bills deserve, and, I am sure, will receive the serious consideration of the Legislature.

Game.

The Conservation Department, through the Game Division, will offer appropriate measures for the further protection and propagation of game-birds, fur-bearing animals and all wildlife.

Budget.

The Budget of the Conservation Department will not differ much from the present year, and nothing in it requires special reference.

SMALL-MOUTH BASS SITE INSPECTED BY GOVERNMENT EXPERT

Owing to the excellent results obtained in the rearing of trout at the Cushwa Springs station of the department in Washington County, this site was under consideration for the establishment of a small-mouth bass nursery, which is so urgently needed in Western Maryland.

Accordingly, the department requested Mr. G. C. Leach, chief, division of fish culture, U. S. Bureau of Fisheries, to investigate the property and advise the department of his opinion regarding the merits of same for small-mouth bass culture.

On January 13, a visit was made by Mr. Leach, accompanied by A. M. Powell, Maryland State Superintendent of Hatcheries, and J. P. Snyder, superintendent of the Bureau of Fisheries Station, Cape Vincent, N. Y., and following is the report submitted by Mr. Leach:

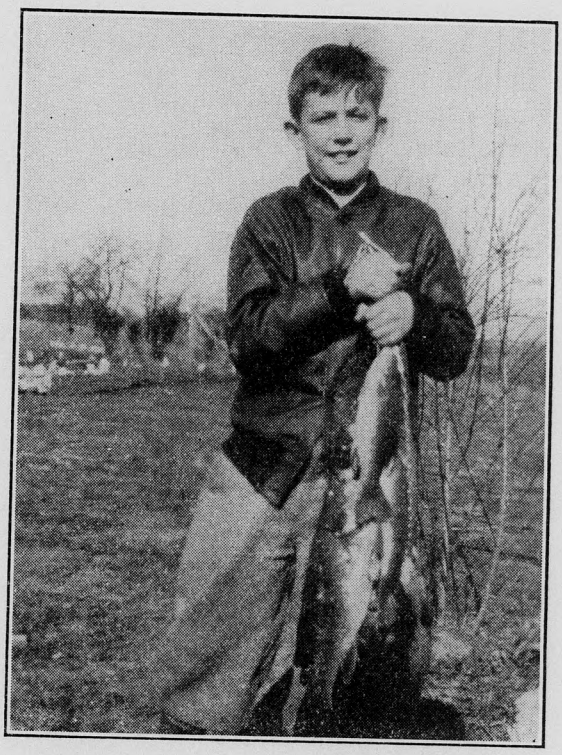
"The flow of water from the Cushwa Spring at a point just below the nursery ponds was approximately 400 gallons per minute. At a point approximately 1,000 feet below the spring, the flow was estimated at some 800 to 1,000 gallons per minute, which would indicate that considerable additional water is added to the supply from various sources below the main spring.

"After a careful inspection of this property I am of the opinion that the terrain is not suitable for the construction of bass ponds on a large scale or a scale sufficiently large to meet the requirements of the State of Maryland. A small pond of seven or eight acres could be constructed on the property below the spring. The property to the left of the spring, looking downstream, could be obtained for pond use, but it would be necessary to pump the water to a high elevation to flood the area. I am therefore of the opinion that the Cushwa Spring would make an excellent nursery for the production of legal-sized fish. If the spring level can be raised two feet without detriment to the flow, nursery ponds, not over six feet in width and 75 to 100 feet in length, can be constructed below the spring. The discharge from these nursery ponds can be carried into a series of five or six larger ponds, provided sufficient property is obtained below the spring.

"It is my suggestion that the eggs be incubated at one of the State hatcheries and the fish held and fed until they are about one and one-half inches long, at which time they should be transferred to the Cushwa nursery ponds which would probably be about the first of May. The young trout would be held until October and then transferred to the large rearing ponds where they would be retained until the following September, at which

time they should be planted. A number of these large fish would spawn naturally and would be available for the anglers the following spring. This program, of course, could not be carried out if there was not sufficient water in the stream to maintain the large fish over the winter. If it could be carried out some advantage would be derived through natural spawning and the fish would be in much better condition for the anglers the following spring, at which time they would have lost all the flavor of artificial fish food.

"Mr. Snyder was of the opinion that the spring water-level could be raised four feet. I very seriously doubt if such a high elevation could be obtained without a loss of flow. Experiments



FRANK L. BENTZ, Jr.,
A Successful Young Angler of Washington County.

could be conducted with sand bags, however, to determine just how high the spring water-level can be raised. The raising of the level of the spring would add to the aeration of the water, and aeration appears to be necessary on account of the low oxygen content which has been shown to be as low as 2. It would also give better drainage to the large ponds constructed below the nursery ponds. I believe the facilities at the Cushwa Spring are sufficient to enable the State to produce from 75,000 to 100,000 legal-sized fish each year.

"A site near Williamsport was inspected as being a suitable location for the construction of a small-mouth bass hatchery. The water supply is sufficient, but the topography of the ground

Budget.

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"A site near Williamsport was inspected as being a suitable location for the construction of a small-mouth bass hatchery. The water supply is sufficient, but the topography of the ground

is such that not more than 25 acres could be obtained for ponds. Superintendent Powell was advised that the bureau would consider it much too small.

"The Bureau of Fisheries, in selecting bass hatchery sites under the provisions of the White Bill, has not been considering anything less than 100 acres in area. It is believed that the State of Maryland should endeavor to obtain a site of at least 100 acres in order that from 60 to 75 acres could be utilized for ponds. Such a hatchery can be operated as economically as one of 25 or 30 acres. The larger hatchery will be necessary at some time in the near future to meet the demands of the State organization for fish, and if it can be located in the vicinity of Frederick or Hagerstown it will be in a strategic position to furnish small-mouth bass and possibly other warm-water species to the waters of Central Maryland which are in much need of such species.

"I therefore recommend for your consideration the abandonment of the Cushwa project as a combined trout and bass rearing station and suggest that it be utilized as a trout nursery. I recommend that a tract of at least 100 acres be obtained in Central Maryland to be used as a bass hatchery."

January 14, 1931.

TWELVE-INCH TROUT PLANTED IN WASHINGTON COUNTY STREAMS

On January 12, A. M. Powell, Superintendent of State Hatcheries, assisted by 15 members of the Hagerstown Chapter of the Izaak Walton League, including Frank L. Bentz, secretary of the chapter, distributed 1,696 large trout from the Cushwa Springs rearing ponds. According to Mr Bentz's report, these trout were carried to all parts of the county in a large truck and several automobiles. They were placed in buckets carrying from six to fifteen and carried by the men one and one-half miles along the stream to the most favorable spots that could be found. The distribution occupied the best part of two days and more than 50% of the fish were 12 inches in length and many of them 14 inches. It is believed that the trout were planted in very favorable locations, and much credit for the work goes to E. R. Updegrove, Raymond Wilson, and Albert Crampton.

Distribution is as follows:

NAME	LOCATION STREAM	QUANTITY
L. Jacques	Max Huyett's Farm	43
K. Bell	Kemp's Mill Stream	58
B. Crampton	Sharpsburg—Shawman Run	36
J. F. Miller	Boonsboro—Crystal Cave Run	44
R. L. Hartle	Smithsburg—Wolfinger Farm, Marsh Run	28
Dr. Martin	Doub's Run	25
Dr. Martin	Semple's Run	23
R. Cook	Lane Run	108
P. Ruffner	Sharpsburg—St. James Run	56
J. R. Taylor	Beaver Creek—Mt. Etna Run	35

Truck	F. Young Run	500
Truck	Semple's Run	500
Truck	Renche's Run	180
Truck	Fort Head Run	60
Total		1,696

ANGLER'S LICENSES SOLD OCTOBER 1, 1929, TO SEPTEMBER 30, 1930

County	State-wide res. lic.	State-wide non-res. lics.	Dip-net lic.	Total
Allegany	1,850	8	166	$2,110.90
Anne Arundel	48	....	....	45.60
Baltimore County	507	17	1	564.30
Baltimore City	1,404	58	26	1,728.54
Calvert	4	....	....	3.80
Carroll	733	73	59	1,155.20
Caroline	77	6	....	101.65
Cecil	133	87	....	539.60
Dorchester	15	14	....	80.75
Frederick	1,827	45	149	2,232.50
Garrett	938	55	....	1,152.35
Harford	375	25	2	478.80
Howard	375	....	6	367.65
Kent	15	2	....	23.75
Montgomery	988	43	18	1,177.05
Prince George's	158	2	2	163.40
Queen Anne's	26	3	....	38.95
Talbot	5	....	....	4.75
Washington	2,532	152	244	3,591.00
Wicomico	35	15	....	104.50
Worcester	2	3	....	16.15
Simon Atlas	....	159	....	795.00
K. Burkins	184	89	....	629.00
American Automobile Association	....	7	....	35.00
Totals	12,231	863	673	$17,140.19

State-wide resident	12,231
State-wide non-resident	863
Dip-net licenses	673
Total	13,767

GARRETT COUNTY—DEEP CREEK LAKE LICENSES

Kind of license	Number	Amount
State resident, non-resident of county license	39	$97.50
State non-resident license	106	530.00
Boat licenses, $2.50	16	40.00
Boat licenses, $5.00	37	185.00
Boat licenses, $10.00	4	40.00
Totals	202	$892.50

MUST WE HAVE AN OYSTER REVOLUTION?

This Is A Plea For Peace While There Is Yet Time. Don't Let Us Have "Northern" And "Southern" Oysters.—Will It Be Warfare Or The Helping Hand?

By JOHN B. FOWLER

[Editor's Note: The following article is reprinted from *Fishing*, January issue, and it is believed that the subject-matter will be of interest to many of the Maryland oyster packers.]

If 10,000 doctors throughout the United States learn from accepted authorities exact scientific facts about the oyster as a cure for certain dangerous forms of anaemia and other prevalent human ills, these 10,000 doctors are going to be telling tens of thousands that they must eat oysters. Scientific men, as yet, know very little about the value of oysters in the diet and if facts are uncovered and presented to them the demand for oysters will so far exceed the maximum supply that all of the present industrial difficulties of the oyster business will be pushed to one side.

At an expense of thousands of dollars annually, a comparatively small group of oyster producers have been financing all of the research work aimed in this direction and while the few who have been paying have realized that the benefits to the oyster industry as a whole are benefits of infinite value to themselves it is not surprising that they have begun to take stock of the entire situation and ask why those who pay for this campaign are almost all located in one section. They also ask whether the business practices of producers in sections not represented by contributors to the research work are helping or if they are impeding progress. Would it be better, they now ask, to limit the research work and the resultant publicity to the oysters of any certain district? Should this impending condition be laid before the producers in other districts in order that they may participate before they are definitely placed outside the pale?

North Carolina has a good crop of oysters but a fading demand. North Carolina seems to have withheld interest from the scientific research work which has been conducted by the Oyster Growers & Dealers Association. Why?

Virginia conditions have grown worse from year to year. The Oystermen's Protective Association, representing James River tongers, has approved a passive course and at their annual meeting in Newport News on December 26 taxes for inspection and replenishment of oyster beds were condemned and blame for depleted condition of the natural oyster rocks and planting grounds in Hampton Roads and tributaries laid to pollution from adjacent municipalities.

If the entire strength of the oyster industry of the United States is put behind the scientific research and if as a consequence hundreds of thousands of people feel that they must have oysters in their diets, there will be no shortage of consuming public for North

Carolina's oysters and James River oystermen will not be worried about taxation but will be insistent upon state aid to increase their production and protect the highest possible standards of quality in order that their oysters may rank high in the acceptance of the scientists.

So we open the book to see the extent to which these and the other southern states are backing the sorely needed scientific research and what do we find? Practically nothing at all! The northern oyster growers are doing all the work.

As a consequence, certain northerners are beginning to ask themselves—

1. Why not simply include northern oysters in the consideration of our scientists?

2. Why not let it be known that the findings of these scientists apply only to northern oysters?

3. Why not create a mighty demand for northern oysters which will cause them to be specified as the ones to cure all the various ills which our scientists find can be corrected by our oysters?

Such a condition must not be brought about as it would establish in the minds of the medical practitioners throughout the country, members of the municipal and state boards of health, and other authorities the feeling that only northern oysters are able to measure up to certain standards and it will be years and years before the southern oysters will be able to overcome the consequent handicap.

This condition must be avoided! The southern growers must bring themselves face to face with the seriousness of the situation before it is too late.

Interviewing one of the leaders of the northern growers the writer was told, "We have done everything we can to interest other sections, but, as you know, they give us practically no support. If you can cause them to realize what may happen and if as a consequence they will cooperate with us, it is certain that prices can be maintained where north and south alike will all make money. If they continue to refuse to cooperate and to ride free, the northern growers will be better off to have an association of their own and give the full force of the scientific findings to northern oysters. We do the work now and furnish the funds for all the rest and have to compete in price with those who take advantage of the demand created by the money we spend on research and related publicity."

MARYLAND FISHERIES

PUBLISHED BIMONTHLY BY CONSERVATION DEPARTMENT,
SWEPSON EARLE, Commissioner.

No. 8

JANUARY, 1931

[*This publication presents the views and policies of the Conservation Department.*]

THE OYSTER SUPPLY TEN YEARS AGO AND TODAY

The department's attention was recently called to a communication in the *Baltimore Sun*, which referred to the oyster supply in 1920 and the present supply, and censured the department for not maintaining it at its level of ten years ago.

The person who wrote this article evidently did not take into consideration the fact that the production of oysters in 1916, the year before the United States entered into the World War, was 4,120,819 bushels. In 1917 when the United States engaged in the conflict the watermen found more remunerative occupations than oystering, and our statistics show that less than one-half the number were engaged in oystering during 1917 and 1918 than previously. The rest which the oyster bars received during those two years enabled them to catch up to a certain extent, and from 1919 to 1921 the production jumped to between 4,400,000 and 4,958,000 bushels. Since that time, there has been no let-up in operations, and naturally the bars have gradually been reduced. It was not until 1921 that any effort toward rehabilitation was started, even in a small way by shell-planting (less than 100,000 bushels of shells being planted on experimental areas), and it was not until 1927 that the Legislature provided sufficient funds for shell-planting on a large scale.

Since this time, however, the department has conscientiously carried out a yearly shell and seed oyster planting policy, and the 2,000,000 bushels of shells which have been placed on various depleted bars of the Bay and tributaries show a uniformly good catch of young growth at the close of the year 1930, with excellent prospects for an increase in production in the fall of 1931 and even more in 1932 when these oysters reach a marketable size.

In 1920 the yield from the oyster bars of the Potomac River was sufficiently large to give the dredging fleet employment for two months during the oyster season. The persistent decline in the production of these bars since that time, as well as some of the more prolific Bay bars, is the real cause of the low production in 1929 and the spring of 1930, which was 1,887,421 bushels taken from Maryland waters.

Following the message by Governor Ritchie to the Maryland Legislature recommending that joint committees of the Senate and House of Delegates on Chesapeake Bay and Tributaries work out a solution for the Potomac, it may be said that data is now being presented to the chairmen of these committees, Senator J. Allan Coad and Delegate Philip H. Dorsey, Jr., and it is hoped that something constructive will be accomplished before the end of the present session, in order that the States of Maryland and Virginia may adopt proper policies for the restoration of the once prolific oyster bars of the Potomac.

Just at this time it may be said that the State of Virginia is very anxious that something be done in Potomac, and we may expect full cooperation from the officials of that State. It is unfortunate, however, that the General Assembly of Virginia does not meet again until 1932, which may necessitate some delay in having that body concur in what Maryland thinks best for the Potomac.

REVIEWING THE 1930 CRAB SEASON

The crab situation in the waters of Maryland is most encouraging. The Seafood Auditor's report shows a marked increase over ast year. During 1930, 83,981,241 crabs were taken, or an increase of twenty-five and one-fifth per cent. (about 17,000,000 crabs over the previous year). The number of crabbing licenses issued showed an increase of practically 777 since 1926, when the State of Virginia passed a law to protect the female egg-bearing crab in their waters. Statistics also show an increase in the number of crab packers and shippers operating in Maryland. What is most striking in the return of crabs to Maryland waters is the volume of business in the upper Chesapeake Bay and upper Potomac River. Rock Hall, for instance, handled over 25,000 barrels of hard crabs and 79,000 peeler crabs more than the previous year. Claiborne and St. Michaels showed an increase of over 33 per cent., while Kent Island showed an increase of 100 per cent. on hard crabs and 500 per cent. on soft crabs and peelers. The Potomac River, from St. Mary's to the Wicomico, showed from 30 to 100 per cent. increase over the previous year.

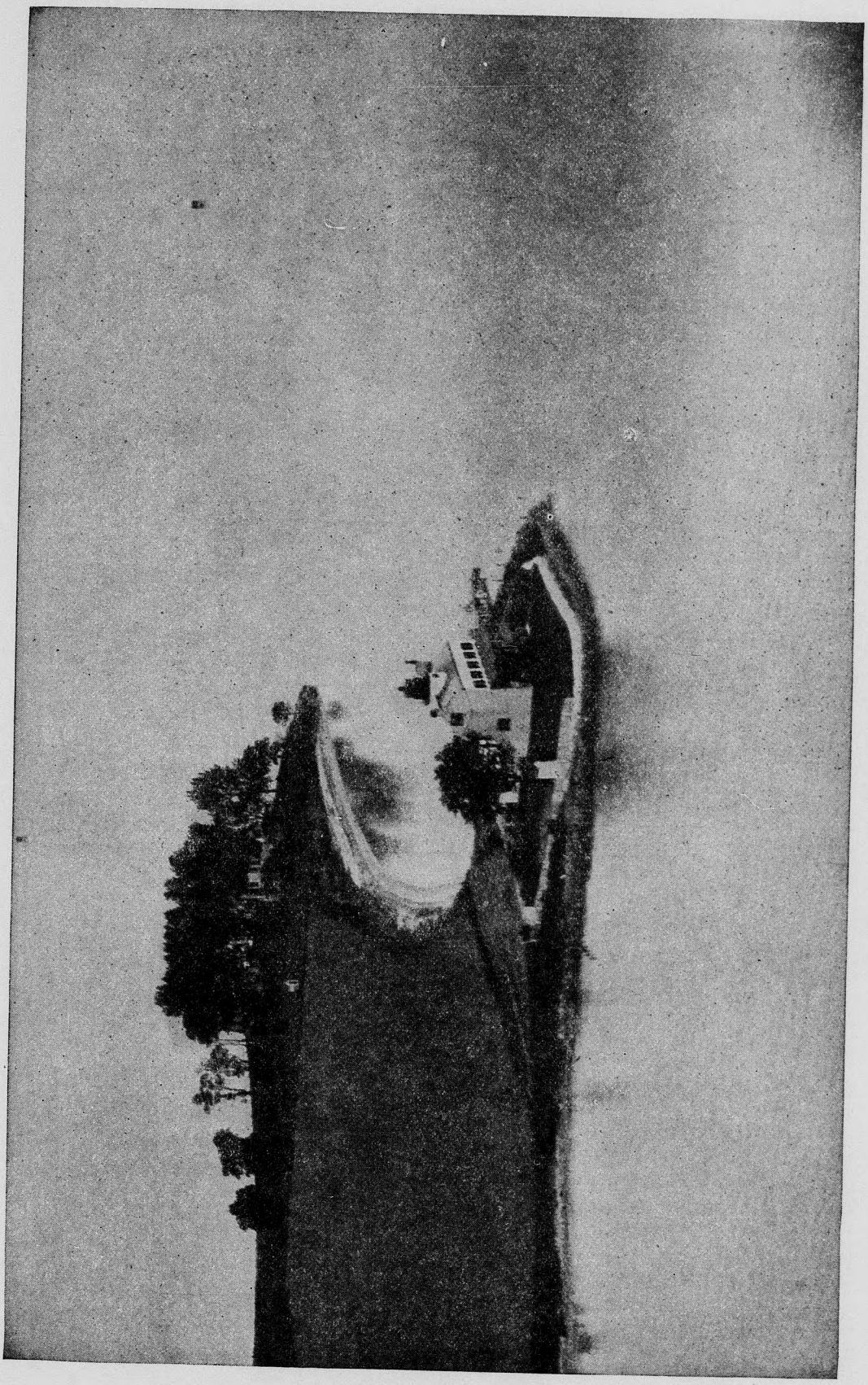
The department is most encouraged by the return of this valuable sea food to Maryland waters, and is convinced that the blue crab of the Chesapeake Bay may be perpetuated. However, Dr. Truitt, in his work at the Chesapeake Marine Laboratory, urges a further study of the migration and hibernation habits of the crab in Virginia as well as Maryland, in order that information may be available should the crab supply show a falloff. While statistics give the crab production of Maryland waters in 1930 as about 84,000,000, it would be difficult to determine the actual number taken from this State by week-end visitors, a large per cent. of whom visit the State by motor and carry bushels of crabs away with them each week This might run the actual number of crabs caught in Maryland close to 100,000,000 during the past season.

Following the terrific drought that has hit Maryland and its disastrous effects the department feels especially encouraged that through this work the people in the tide-water counties and especially the watermen have increased their livelihood about $500,000.00.

To picture the full economic benefits of the increase would necessitate a long study, as practically every fiber of the business structure in the counties is affected. As a basis to figure the monetary value of the industry in 1930 we note that the crabbers received about $1,000,000.00 on the crabs they caught. As noted, this was an increase of 56 per cent. over 1928. The crab packers had to increase their labor, and this helped to supply work for many people. Further, the crab pickers and crabbers from the money they earned were able to pay their bills and buy things that they needed. The communities made profits on the additional goods that they sold. The truckers made more profits hauling crabs and crab-meat. The automobile dealers sold more trucks and cars. The banks, probably, handled more money, and in fact everybody benefited.

There is also a further angle from which the tide-water counties benefited. The increase in crabs has drawn many people to the Eastern Shore and Southern Maryland for the pleasure of catching crabs and every one of these people spent money in local communities, either for boat hire, to buy bait, gasoline for their cars and money for meals, etc. All of which has additional profits to the communities.

At the close of the crab season in our waters November 1, small crabs as well as matured ones were plentiful on the bottoms and the department anticipates even a greater increase in production in 1931.



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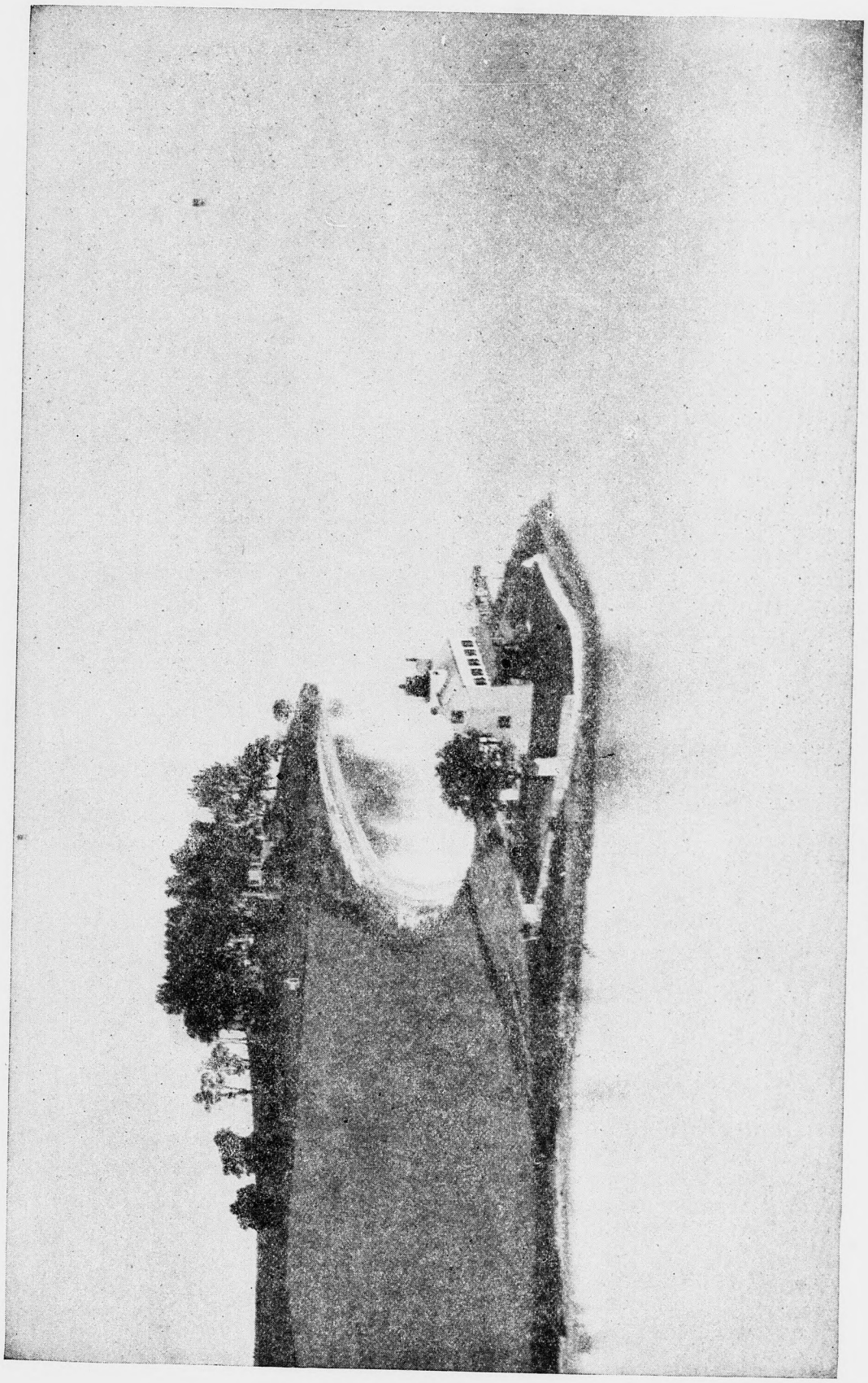
There is also a further angle from which the tide-water counties benefited. The increase in crabs has drawn many people to the Eastern Shore and Southern Maryland for the pleasure of catching crabs and every one of these people spent money in local communities, either for boat hire, to buy bait, gasoline for their cars and money for meals, etc. All of which has additional profits to the communities.

At the close of the crab season in our waters November 1, small crabs as well as matured ones were plentiful on the bottoms and the department anticipates even a greater increase in production in 1931.



Southerly End Blackistone Island, Potomac River.

OYSTER-RESEARCH PROGRAM OF OYSTER GROWERS AND DEALERS ASSOCIATION TO BE EXPANDED DURING 1931

According to an article appearing in the January issue of the *Fishing Gazette*, it was agreed at a meeting of the Research Committee of the Oyster Growers and Dealers Association in New York City on December 16 to carry on and enlarge the research work being done by the organization under the direction of Dr. H. D. Pease. It is stated that $25,000 will be required to continue the experiments already under way, and the entire industry will be solicited to make up this fund.

At this meeting Dr. Pease gave a full account of his work during the past year and outlined his program for 1931. The major portion of the talk was devoted to nutritional studies of oysters, and the work already accomplished in the use of oysters as treatment for anaemia and pellagra was discussed.

In connection with this latter phase of Dr. Pease's work, a most interesting article entitled "Oysters for Anaemia" appeared in the January issue of *The Ladies' Home Journal*, and attracted wide attention. It is thought that this article, appearing in a publication of national importance and read by thousands of housewives should result in an increased demand for oysters. The green oyster of Connecticut, which is mentioned in this article as being highly effective in the treatment of anaemia, is similar to the green oysters found in the upper Bay, according to Dr. Pease to whom samples were sent for examination.

The next annual meeting of the Oyster Growers and Dealers Association will take place in August at Sayville, Long Island, and Dr. R. W. Dodgson, of the Ministry of Agriculture and Fisheries of England, Dr. C. M. Yonge, of the Marine Biological Association Station at Plymouth, England, and Dr. J. W. H. Eyre, of Guys Hospital and the Fishmongers Company of London, have been invited and are expected to attend the convention, which promises to be a highly interesting one.

NOTES ON CRAB BUSINESS

The following notes and comments are intended to give an idea of the activities and the nature of the crab business in the various sections of the State as noted in Seaford Auditor's report. All of the percentages or figures mentioned are based on the report figures for 1930.

Baltimore City—Practically all of the crabs reported were handled on commission and received direct from the crabbers. The large increase in both hard and soft crabs is attributed to the fact that in many sections where crabs are now plentiful there are no regularly located dealers and most of the crabs go into Baltimore.

Annapolis—Approximately 83% of hard crabs and 88% of soft crabs handled by crab-meat and soft-crab packers. Approximately 40% of hard crabs and 45% of soft crabs sold retail.

Galesville—Approximately 75% of the hard crabs and 90% of the soft crabs caught are represented by these figures. The balance are included in the Baltimore report. Approximately 20% of these soft crabs were handled by a regularly located packer; the balance were shed by individual crabbers and sold to buyers.

Broomes Island—The report figures represent about 75% of the catch in both hard crabs and soft crabs; the balance of the crabs are included in reports from Baltimore and other sections. Approximately 23% of the soft crabs indicated were sold retail and the balance sold in Washington. The large increase in the soft crabs available made it more profitable to handle them than the hard crabs; hence the sharp decrease in the quantity of hard crabs hauled. There is only one regular wholesale dealer, one retailer, and one irregular buyer on Broomes Island.

Solomon's Island—All of the crabs reported were handled by regular packing houses.

Bushwood and Rock Point—Approximately 60% of the hard crabs were handled by regular packing houses. All of the soft crabs and the balance of the hard crabs were handled by buyers and truckers.

Ridge, Wynne and Airedale—Approximately 5% of the hard crabs and 20% of the soft crabs were handled by a regularly located packer; the balance of the crabs were taken to Crisfield by buy boat and handled there. The bulk of these crabs are from the tributaries of the Potomac on the Maryland side.

Rock Hall—The large increase in the crabs in the Bay has put Rock Hall definitely in the crab business. Approximately 64% of the soft crabs and 48% of the hard crabs indicated were handled by two regularly located houses and the balance were handled almost entirely by truckers. Of the total quantity handled about 20% went to Baltimore, and the balance out of State. About 3% of the total hard crabs handled were cooked for crab meat by a packer.

Kent Island—Approximately 28% of the hard crabs indicated were cooked by crab-meat packers. Approximately 25% were handled by regularly located hard-crab dealers shipping by barrel. Of the balance of the hard crabs a little over half were shipped out of State by railroad and express, the rest by truck. All of the soft crabs indicated were handled by regularly located buyers on the Island and at Queenstown.

Claiborne and St. Michaels—All of the hard crabs and soft crabs were handled by regularly located packers. All of the hard

crabs were cooked for crab meat except a small percentage which were shipped to Crisfield and on special order.

Tilghman's Island—All of the crabs indicated were handled by regularly located crab-meat packers.

Oxford and Bellevue—Approximately 18% of total hard crabs and all the soft crabs were handled by regularly located crab-meat packers and shedders. The balance of the crabs with the exception of about 200 barrels were handled by truckers making regular trips out of the State.

Cambridge and Secretary—Approximately 79% of the hard crabs indicated were handled by crab-meat packers. Approximately 17% shipped out of State from Secretary and about 4% shipped out of State by railroad and express from Cambridge. In addition to the above totals of crabs, an undetermined quantity of crabs was shipped to Baltimore by steamboat and truck and is reflected in the Baltimore reports.

Hoopersville and Fisher Creek—All of the crabs indicated were handled by regularly located crab-meat packers and shedders.

Wingate, Toddville, etc.—All of the crabs indicated were handled by regularly located crab-meat packers and shedders.

Elliott Island—One packing house handled the entire amount of crabs indicated.

Taylor's Island and Hudson—These figures do not represent the whole catch in this district as a quantity of crabs were shipped to Baltimore and are included in the Baltimore report. Approximately 72% of the crabs indicated were handled by crab-meat packers and the balance were sent to New York on commission.

Deal's Island—All of the crabs indicated were handled by regularly located crab-meat packers and shedding houses. The steady decline in both hard crabs and soft crabs is due to competition from other sections and not to a lack of crabs in the waters.

Marions Station and Rumbly—All of these crabs were handled by regularly located shedding houses. The decline noted from 1929 is due to competition and low market prices and not to a scarcity of peelers.

Crisfield—All of the crabs indicated were handled by regularly located crab-meat packers and shedding house. The total of peelers include those from Jenkins, Apes Hole and Johnson son's Creek. It is interesting to note that about 18% of the Maryland hard crabs used in Crisfie d were hauled by truck from far up the Bay sections. Maryland waters furnish only about 12% of the hard crabs handled at Crisfield.

Smith's Island—All of the crabs indicated were handled by regular dealers on the Island. The soft crabs produced were all

brought to Crisfield. Some of them were bought by Crisfield dealers, others were shipped by train and truck on commission and to fill direct orders.

Worcester County—The report of this county is an estimate based on data obtained from crabbers and shippers from various parts of the county. There are no regularly located crab houses that do a wholesale business. Practically all of the crabs that the crabbers cannot dispose of either retail or to the retailers are shipped on commission out of the State.

CRISFIELD

Contributed by A Native of Somerset

Until the shipping of sea food became a possibility, as a result of increased railroad facilities and refrigeration, there was no Crisfield. Most of the water-front towns of Maryland are wont to entertain the visitor with stories connecting the town with the Revolution. Crisfield cannot even boast of its part in the Civil War, because it was along toward the close of that momentous struggle that Crisfield came into existence.

Founded about 1867, as has been intimated, because of the presence of sea food in large quantities in nearby waters, the name and fame of Crisfield was carried as far west as the railroad ran in those days. Up until this time, the good people of Somerset had been catching oysters by means of tongs, but most of them were consumed at home or sent to some nearby port in a vessel. It remained for the Yankees from down-east to show our people how to use the dredge and thus keep production up with the demand.

Just for the benefit of those who get pleasure out of attending post mortems, let it be said that if consumption had always been confined to homefolks, and if the catcher had confined himself to the use of tongs and had never seen a dredge, oysters would be as plentiful today as ever.

Tradition has it that a man named Goodsell moved from New England to the lower Eastern Shore and established the first oyster house that was destined to make a town on the banks of the Little Annemessex about a mile from the justly famous Tangier Sound. Now the peculiar feature about this river is that it starts in a marsh and ends in a marsh and nowhere along its course of four or five miles can one find any high land. Consequently Mr. Goodsell was confronted with the task of picking the most desirable site for his business enterprise with very few inducements to be considered. There was, however, a necessity for placing the structure on deep enough water for the work boats to tie up alongside. This seems to have been the consideration that actuated the founding of Crisfield. In order to find water enough it was necessary for him to place his house more than a half mile out on this marsh and shallow water, and that ne-

cessitated the driving of piles on which it was to stand. The boards of which the floor was made were purposely left open about two inches, and as the oysters were opened the shells were allowed to drop through the floor until at length they came up to the floor.

Good news travels fast and soon the success of this pioneer attracted other settlers who built in like manner. The whole water-front of the town is made up in this same way, and if one wants to plant his feet on solid earth it is necessary for him to step back at least a half mile. In 1867 the railroad people were attracted by the prolific supply of oysters to extend their line, which at that time had its terminal in Salisbury (about 38 miles north), down to this settlement.

The story is that the Honorable John W. Crisfield, a prominent lawyer of Princess Anne, was at that time president of this railroad, and so in his honor the name of Crisfield was bestowed upon it. The last mile of this road was built on trestles and as time went on the cinders from the engine filled in and made solid land on both sides of the track. Dwelling houses soon sprang up fronting the railroad, and to one who does not know the history of how Crisfield came into existence, it looks as though the railroad ran down the main street of the town.

For more than ten years after its founding, Crisfield depended on oysters alone to furnish employment to its inhabitants. During these days the whole place had the appearance of a newly founded western town that has been brought into existence by the discovery of gold. Open bars and gambling places flourished.

The story is told of one saloon keeper who had been commissioned a Justice of the Peace, that he always opened his court with the remark: "Gentlemen, although the court is in session, business at the bar will proceed as usual."

About the year 1877 an express messenger named Landon conceived the idea of carrying a few soft crabs to some friends of his in Philadelphia. The fame of this crustacean soon spread and the shedding of crabs in captivity soon became a flourishing business. With oysters still plentiful in both Tangier and Pocomoke Sounds, settlers were attracted to Crisfield in large numbers and substantial homes were built in what had become known as the up-town section.

The peak of oyster production seems to have been reached around 1890 when Tangier Sound alone was credited with furnishing from four to five millions of bushels of marketable oysters. But like every other thing that becomes famous, the demand became too great. Large three-masted schooners from New England came into our waters, and so anxious were our people to make money that they sold them the bottom, so to speak. That is, there was no law on the subject of culling out marketable oysters, so the Yankees bought their cargoes just as it came off the bottom. They are reputed to have paid the generous sum of *seven* and *eight cents* a bushel and used a half barrel for a bushel measure.

From that time oyster production in Somerset has been de-

clining yearly, until today there are only two rocks within her confines to which oystermen can resort with profit, i. e., Halls Bar and Marumsco Point.

Had it not been for the crab business the town of Crisfield would surely have been offered for sale. This business has been steadily increasing until today no less than 90% of all the soft crabs that are eaten in the United States are shipped from Crisfield. This industry, too, has had its crises, but wise legislation conceived by the present Conservation Commissioner of Maryland and backed by Governor Ritchie and carried through the legislatures of Maryland and Virginia, coupled with the natural resourcefulness of the crab in the matter of reproduction, has placed it on a solid foundation. Unless something unforeseen occurs, the crab business bids fair to furnish Somerset with a livelihood for a good many years to come.

But what are we citizens of Somerset doing to increase the oyster output and restore the once prolific Tangier Sound to usefulness? As near as I can figure out, *nothing*. Every time we have an election there is a great deal of oratory about the oyster, and so far oratory has been all the consideration he has received in Somerset. Some wit has remarked that the oyster has literally been talked to death, and it is so.

In 1906, we had a planting law passed, and under this law we were to determine what was productive bottom and reserve that for the natural rock oystermen. We did this and leased out to some very good citizens the non-productive bottom. They spent a lot of money making it productive and then the oystermen started a riot which ended in the session of 1914, at which legislation was passed taking it from the planter and giving it to the natural rock fishermen at the State's expense. This helped him and the supply for one year, and now it is all just the same, planted and unplanted. True, we have some young growth in our waters, and I do not want to belittle the importance of this, but because of the presence of the screw-borer in large quantities there is no certainty that this young growth will ever mature. I hope it will and so does every good citizen, but I reiterate there is no certainty that it will. However, you can almost put it down for a certainty that if the dredgers are allowed to continue their operations all over this young growth, it will never mature because a lot of it will be hammered to death and another lot be carted off to put on private beds.

So, as I see it, the closing of Tangier Sound, so far as taking oysters in any manner is concerned, is the first step toward rehabilitation, but closing by itself is not going to solve the problem. There has to be a planting of oysters and these oysters have got to be let alone long enough to spawn. The Conservation Commission planted some 35,000 bushels of oysters in 1928, but because there was no closed season practically the entire lot was scraped up the same year in which it was planted. There may be some places where a few shells would help the situation, but the natural

rock oystermen state that shells are plentiful on nearly all the bars.

Crisfield is essentially a sea-food town. It was founded on sea food and has been reared on sea food, and because of its geographical location it is better adapted to the production and marketing of sea food than any other commodity. All talk of turning Crisfield into a manufacturing centre is "bunk." We have no raw material, and by the time we imported the raw material we could not compete with towns more favorably situated. Crisfield has the reputation of being the best sea-food town on the Atlantic Coast. If that is so, all we need is the sea food to fill the orders. Let us take some constructive steps even if it does necessitate a little hardship for a season or two. No material gain was ever made unless a corresponding sacrifice accompanied it.